

UNIVERSAL SIGN LAMP SYSTEM USING COLOR CODED SYMBOLS

BY

Chang Soo KIM

5 CROSS REFERENCES RELATED TO THIS APPLICATION

The applicant claims the benefits and priorities of the United States provisional application numbers 60/454/157 filed on March 12, 2003; 60/455,540 filed on March 18, 2003; and 60/454,156 filed on March 12, 2003.

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BACKGROUND OF INVENTION

The present invention relates to a sign lamp. More particularly, the present invention relates to an improved universal sign lamp system using color coded symbols and effectively coordinating with blinking and flashing characteristics of light bulbs.

15 Symbols are known to better deliver message over letters that require understanding of a language. A variety of signs are presently being used for the convenience's sake in almost all nations on the globe. Further, an increasing number of signs are in use inside business buildings together with letters. For example, a lady's room is expressed by a combination of letters and symbols that show a lady in a simplified drawing format.

25 For an individual to recognize symbols and letters in an unfamiliar environment and to take an action in a

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convinced manner is substantially affected by cultural
backgrounds and mother languages to which one has been
mostly exposed. In this sense, the conventional symbols
and letters have limitations in terms of universal
5 consensus.

The applicant believes that a color coding system
using universally recognized colors would optimally
supplement drawbacks of the conventional sign systems.

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SUMMARY OF THE INVENTION

The present invention is contrived to overcome
conventional disadvantages. Accordingly, it is an object
of the present invention is to provide a color coded sign
system effectively coordinating with blinking and flashing
15 characteristics of light bulbs. Another object is to
provide a universal standard form for the sign system.

To achieve these and other objects, the color coded
sign system comprises a base frame mounted on a wall or a
ceiling, and a plurality of replacement panels each having
20 at least one opening where a selected one of the
replacement panels is detachably hooked in hook rails of
the base frame. The opening is covered by a colored member.
The colored member selectively adopts blue, red, green,
purple, brown and orange, wherein the blue, red, green,
25 purple, brown and orange colored members sequentially
signify a man's restroom sign, a lady's restroom sign, an

exit/entrance sign, an elevator sign, a stairways sign and a no exit/entrance sign.

In a preferred version, the color coded sign system comprises a base frame mounted on a wall or a ceiling, a circuit board having at least one electric port with the
 5 circuit board installed in the base frame and connected to a controller, a light bulb having a bulb base detachably mounted in the port where the light bulb is blinkable under control of the controller, and a plurality of
 10 replacement panels each having at least one opening. A selected one of the replacement panels is detachably hooked in hook rails of the base frame, and the opening is covered by a colored member.

In an embodiment, the color coded sign system is
 15 provided with a plurality of light bulbs each having a bulb base, and the flashing member incorporated in the circuit board to control bulb blinking sequences and intervals. The flashing member may be removably provided between the bulb base and the port in form of a bulb
 20 flasher. The colored member may be either an acrylic plate or a glass. Preferably, the acrylic plate or the glass is colored by one selected from blue, red, green, purple, brown, and orange. So the blue, red, green, purple, brown and orange acrylic plates or glasses sequentially signify
 25 a man's restroom sign, a lady's restroom sign, an exit/entrance sign, an elevator sign, a stairways sign and a no exit/entrance sign. The acrylic plate or the glass is

two-tone colored by blue and red to signify a bisexual common restroom. In a preferred mode, each replacement panel is substantially prismatic in shape.

An advantage of the present invention is that the color coded symbols provided in combination of colored plates and non-colored lamp or of colored plates and blinking and/or flashing substantially improve recognition rate compared to the conventional symbols, thereby enhancing usability and applicability. In addition, the interchangeability of the replacement panels allows flexibility and saves cost, thereby enhancing user satisfaction while decreasing maintenance cost. Further, the color allocation coded with ergonomic senses minimizes error ratio in finding the wanted spot, thereby maximizing product reliability.

Although the present invention is briefly summarized, the fuller understanding of the invention can be obtained by the following drawings, detailed description and appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The above objects and advantages will be more apparent by describing the present invention with reference to the accompanying reference drawings, in which:

FIG. 1 is a view showing a color coded sign system according to the present invention;

FIG. 2 is a partially exploded view showing construction of the present invention;

FIG. 3 is a perspective view showing another embodiment of the present invention;

5 FIG. 4 is a view showing still another embodiment of the present invention; and

FIG. 5 is a flowchart showing operation mechanism of the present invention.

10 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

FIG. 1 shows a color coded sign system 10 with a present panel 12 and a plurality of other replacement panels 12A, 12B, 12C where the sign system 10 is attached to a wall 14. FIG. 2 shows a construction of the sign system 10 to demonstrate its functional mechanism. As shown therein, The color coded sign system 10 is mountable on a wall inside a building to provide easy-to-find indications and directions, for example, for an elevator, a stairway, a telephone booth, restrooms and other public spots frequented by those visiting or working in a building.

In an embodiment, the color coded sign system 10 comprises a base frame 16 mounted on a wall 14 or a ceiling 18 as shown in FIG. 3. A plurality of replacement panels 12 and 12A-12C are provided to each have at least one opening 20. In a preferred mode, the panel 12 selected

from the replacement panels is detachably hooked in hook rails 22 of the base frame 16 and the opening 20 is covered by a colored member 24. That is, each opening 20 is attachedly covered by the colored member 24. The

5 colored member 24 is preferably formed of an acrylic plate or a glass, which is colored by one selected from blue, red, green, purple, brown, and orange.

That is, the colored member 24 selectively adopts blue, red, green, purple, brown and orange, so that the
10 blue, red, green, purple, brown and orange colored members sequentially signify a man's restroom sign, a lady's restroom sign, an exit/entrance sign, an elevator sign, a stairways sign and a no exit/entrance sign.

For a better performance, the color coded sign system
15 10 includes the base frame 16 mounted on a wall 14 or a ceiling 18. A circuit board 26 having at least one electric port 28 is installed in the base frame 16 and connected to a controller 30. At least one light bulb 32 having a bulb base 34 is detachably mounted in the
20 corresponding port 28. The light bulb 32 is blinkable under control of the controller 30. Between the circuit board 26 and the controller 30 is preferably provided a switch 36 for safety purposes. The plurality of replacement panels 12 and 12A-12C are provided to each
25 have at least one opening 20 shaped in correspondence to the user's preferences.

Selectively, a flashing member **38** is incorporated in the circuit board **26** to control bulb blinking sequences and intervals. It is also preferred that the flashing member **38** is removably provided between each bulb base **34** and the corresponding port **28**. In a preferred mode, the flashing member **38** is a bulb flash or selected from other types of flashers including flashing LED to better control the blinking and/or flashing characteristics in cooperation with the controller **30**.

10 The colored member **24** formed of acrylic plates or glasses preferably adopt the colors of blue, red, green, purple, brown and orange to sequentially signify a man's restroom sign, a lady's restroom sign, an exit/entrance sign, an elevator sign, a stairways sign and a no
15 exit/entrance sign.

To improve product usability, the acrylic plates or the glasses for the colored member **24** be two-tone colored by blue and red to signify a bisexual common restroom. As shown in FIG. 4, a prismatic format is also applicable to
20 the sign system **10** so that the replacement panel **12** can substantially prismatic in shape.

FIG. 5 is a flowchart showing how to control the controller **30** in a variety of control modes. As shown therein, when the controller **30** is not manually controlled
25 and the sign system **10** is in an non-electric mode an appropriate panel is selected from the colored replacement

panels 12A-12C (S100). Whereas, when the controller 30 is not manually controlled and the sign system 10 is not in an non-electric mode a preset lighting program automatically starts so that the bulbs 32 perform a preset
5 combination of the bulb blinking and/or flashing (S200). For example, two bulbs 32 are linearly aligned on the circuit board 26, one bulb flashes whereas the other bulb blinks according to the preset program.

When the controller 30 is manually controlled to
10 allow the blinking to begin then the user selects one of the blinking programs (S300). Meanwhile, if the blinking is deselected but flashing is selected the selected flashing is performed (S400). If neither of the blinking and the flashing is selected the controller 30 is set to
15 start stationary light mode (S500) to maintain bulb lighting with neither blinking nor flashing. Also, the blinking function selected to perform one of the blinking programs (S300) may be immediately followed by the flashing function to simultaneously perform the flashing
20 according to one of the flashing programs (S400) as long as electric power remains turned on.

As discussed above, an advantage of the present invention is that the color coded symbols provided in combination of colored plates 24 and non-colored bulbs 32,
25 or the other combination of colored plates 24 and blinking and/or flashing bulbs 32 substantially improve recognition

rate compared to the conventional symbols, thereby
 enhancing usability and applicability. In addition, the
 interchangeability of the replacement panels 12 allows
 flexibility and saves cost, thereby enhancing user
 5 satisfaction while decreasing maintenance cost. Further,
 the color allocation coded with ergonomic senses minimizes
 error ratio in finding the wanted spot, thereby maximizing
 product reliability.

While the present invention has been particularly
 10 shown and described with reference to the preferred
 embodiment thereof, it will be understood by those skilled
 in the art that various changes in form and details may be
 effected therein without departing from the spirit and
 scope of the invention as defined by the appended claims.

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